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TELEFAX COVER SHEET

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DESCRIPTION: here are some of my comments on the ou7 update. feel free to call me with any questions. As far as our next meeting

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ADMIN RECORD
BZ-A-000436

EPA's Comments on the IM/IRA Update for the Closure of OU 7

Overall Comments

- The evaluation of alternatives conducted is inappropriate. DOE needs to performed a detail analysis of the presumptive remedy options. Please look specific comments below.

- The slurry wall containment option needs to be evaluated in detail. DOE should state the geologic formation required to key the slurry wall into. Also, the depth needs to be specified. Construction logistical problems need to be evaluated. The described construction method for the slurry wall can be considered an insitu technique. This insitu technique provides little ability for QA/QC after the application. This lack of ability to control is a disadvantage of slurry wall. DOE needs to explain how they are planning to overcome this problem. Also, the length of the slurry wall around the landfill may be over 1000 ft.

- A thorough analysis of the ARARs needs to be conducted and agreed by the IAG parties. The ARARs should drive the design.

- EPA prefers to remove the dam either by extending the cover or by excavation and placement within the landfill area.

- The groundwater collection and treatment system is a very key component of this action. Detail analysis of alternatives should be conducted following the attached criteria.

- The cost associated with all the options need to be presented in detail.

Specific Comments

Existing Conditions

This section needs to be expanded to include site specific conditions related to the geology and hydrology of the landfill area. Is the waste currently saturated? What is depth to groundwater? What are the Contaminants Of Concern (COCs)? What type of lithology exist in the area?

RCRA Guidance on Cover Design

This section should describe the type of materials available for each of the layers, as well as their function.

Selection Of Cover Options

EPA feels that a thorough identification and determination of the

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ARARs needs to be performed prior to the selection of the alternatives. In this manner, the options can be measured against the regulatory and technical requirements.

The evaluation criteria presented in this section is more appropriate for a preliminary screening of alternatives. In this situation we are using a presumptive remedy approach. One of the advantages of the presumptive remedy approach is the elimination of the need to perform a preliminary screening of alternatives. The presumptive remedy allows you to consider very specific alternatives for a detail evaluation and analysis. EPA feels that the appropriate criteria to be utilized is the nine evaluation criteria under CERCLA. EPA recommends the use of the attached criteria.

The evaluation needs to provide enough detail. For example, long term effectiveness needs to be proven by specific engineering analysis such the HELP model, durability of the materials, geo-tech studies such stability evaluations of the area, leachability of contaminants to groundwater by infiltration, evaluation of groundwater protection to State Quality Standards etc. Another example is the evaluation of the cost associated with each of the alternatives. The cost needs to be provided in detail. Only in this manner, we can identify what is driving the cost for each of the options. This may allow us to develop recommendations to reduce the cost without affecting the quality and performance of the selected remedy.

Cover Options for OU 7

The need for the general fill between the waste and the low-permeability layer needs to be explained. This option analysis need to explain the differences of the four options with the ilustration of the "Conceptual cover termination detail with slurry wall" .

Conceptual Cover Termination Detail with Slurry Wall

It appears to be the first time that a gas collection layer and interim daily cover is mention. This needs to be explained.

This conceptual design is different from the four cover options. This needs to be explained.

Gas Management Plan

EPA feels that it will be more effective to vent to atmosphere if in compliance with the ARARs. EPA feels that gas burners are unlikely to work in this landfill because a lack of enough organic matter.

Grading Options

The 7% slope looks overkill. EPA feels that 3-4% may be sufficient due to low organic content of fill which may cause minor landfill settlement.

Costs

Cost estimates for landfill cover options 4b and 3b are over $400,000 an acre; typical lanfill cover costs for solid waste lanfills are $100,000 an acre - double for hazardous waste landfill. This needs to be explained.

APPENDIX A

TECHNOLOGY EVALUATION CRITERIA

I. Overall Protection to Human Health and the Environment

Minimize current risk:

- Potential to lower the current risk.

How alternative provides Human Health and Environmental Protection:

- Does the alternative treat contamination?
- Does the alternative destroy contaminants?
- Type of treatment.

Need for institutional control measures:

- Is there a need to institutionalize risk?
- What control measures are needed to institutionalize remaining risk?

Risks during implementation:

- Additional risks posed to the community, site workers, or the environment during the demonstration project or remedial action.

II. Compliance with ARARs

Compliance with Chemical Specific ARARs:

- Can ARARs be met?

Compliance with Action Specific ARARs:

- Can ARARs be met?

Compliance with Location Specific ARARs:

- Can ARARs be met?

Compliance with Other Criteria and Guidances:

- Could the alternative satisfy other requirements and guidances.

Ability to waive an ARAR:

- If ARARs can not be met, could the ARARs be waived?

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III. Reduction of Toxicity, Mobility and Volume through Treatment

Reduction in Toxicity,

- To what extent is the mass of toxic contaminants reduced?
- To what extent is the mobility of toxic contaminants reduced?
- To what extent is the volume of toxic contaminants reduced?

Amount of hazardous material

- What portion (mass, volume) of contaminated material is destroyed?
- What portion (mass, volume) of contaminated material is treated?

Type and quantity of treatment residual

- What residuals remain?
- What are their quantities and characteristics?
- What risk do treatment residuals pose?

Limitations

- Minimum contaminant concentration achievable
- Maximum contaminant level applicable

Adverse Impacts

- Potential of the alternative to generate other hazardous by-products after treatment

IV. Implementability

Technical Feasibility

Scale-up Potential

- Is the alternative already a pilot or full scale system?

Ability to construct and operate technology

- What difficulties may be associated with construction?
- What uncertainties are related to construction?
- Is operation of the technology labor intensive?
- What is the automation potential of the technology?
- Degree of specialized and skilled personnel required to operate and maintain the technology.

Reliability/maintainability of the technology

- What is the likelihood that technical problems will lead to schedule delays?
- Potential for system failure during operation and the ease and difficulty of maintaining the equipment.

Ease of undertaking other remedial actions, if needed

- Are other remedial actions needed?
- What are the future anticipated remedial actions?
- How difficult will it be to implement the additional remedial actions, if required?

Ability to measure success

- Is it possible to monitor effectiveness of the remedy?
- What is the likelihood that technologies will meet required performance specifications?

Time to complete cleanup

- Time expected for mobilization and startup.
- Total time required to complete cleanup.

Administrative Feasibility

Coordination with Regulatory Agencies

- What are the regulatory administrative requirements?
- Ability to meet regulatory administrative requirements.

Institutional barriers

- What procurement requirements are needed?
- Are the needed procurement processes well established?
- What documents need to be developed, reviewed and approved prior startup of the system?
- What is the likelihood of meeting all the technical requirements?
- Are all the resources (budget, materials, and services) needed available.

V. Long-Term Effectiveness and Permanence

Ability of the technology to offer a permanent solution

- Expected time-frame of remedy to complete treatment?
- To what extent are the effects of the remedy irreversible?

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Magnitude of the residual risk

- What is the magnitude of the residual risks?
- What remaining sources of risk can be identified?
- How much is due to treatment residuals, and how much is due to untreated residual contamination?
- Will a 5-year review be required?

Adequacy and reliability of controls

- What type and degree of long-term management is required?
- What are the requirements of long-term monitoring?
- What operation and maintenance functions must be performed?
- What difficulties and uncertainties may be associated with long-term operation and maintenance?
- What is the potential need for replacement of technical components?
- What is the magnitude of threats or risks should the remedial action need replacement?
- What is the degree of confidence that controls can adequately handle potential problem?
- What are the uncertainties associated with land disposal of residuals and untreated wastes?

VI. Short-Term Effectiveness

Protection of community during remedial actions

- What are the risks to the community during remedial action?
- How will the risks to the community be addressed and mitigated?
- What risks remain to the community that can not be readily controlled?

Protection to workers during remedial actions

- What are the risks to workers that must be addressed?
- What risks remain to workers that can not be readily controlled?
- How will the risks to workers be addressed and mitigated?

Environmental Impacts

- What environmental impacts are expected with the construction and implementation of the alternative?
- What are the available mitigation measures to be used and what is their reliability to minimize potential

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risks?

Time until remedial response objectives are achieved

- How long until protection against the threats response objectives being addressed by specific action is achieved?
- How long until any remaining site threats will be addressed?
- How long until remedial response objectives are achieved?

VII. Costs

Direct Capital Costs:

- Equipment Cost - Cost associated with technology process unit.
- Construction Costs - Cost of materials, and labor required to install process selected unit.
- Site Development Costs - Expenses associated with site preparation costs of existing property.

Indirect Capital Costs:

- Engineering Expenses - Cost of administration, design, construction, supervision, drafting, and treatability testing.
- License or permit costs - Administrative and technocal costs necessary to obtain licenses and permits for installation and operation of offsite activities.
- Startup and Shakedown Costs - Costs incurred to ensure system is operational and fuctional.
- Contingency Allowances - Funds to cover cost resulting from unforseen circumstances, such as adverse weather conditions, equipment failure etc..

Annual O&M Costs:

- Operating Labor Costs - Wages, training, and fringe benefits associated with labor needed for post - construction operations.
- Maintenance Material Costs - Costs for parts and other resources required for routine maintenance of facilities and equipment.

- Auxiliary Materials and Energy - Costs of such items as chemicals and electricity for treatment plant operations, water and sewer services, and fuel.

- Purchased Services - Sampling costs, laboratory fees, and professional fees.

- Rehabilitation Costs - Cost for replacing equipment or structures that wear out over time.